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AN ITALIAN INDICTMENT OF VACCINATION.

Public Address given at the Opening of the Session of the University of Perugia, November, 1898,

BY

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AN ITALIAN INDICTMENT OF VACCINATION.

An event of great importance, and which ought to be known to everyone, has recently taken place in England. By Act of Parliament passed on 12th August last, compulsory vaccination, which existed in that country since 1853, and of which subsequent legislation in 1867 and 1871 increased the stringency, is abolished.

By royal decree of 29th May, 1889, the English Government appointed a Royal Commission of enquiry on the subject of vaccination, composed of fifteen persons chosen from among eminent scientific medical and non-medical experts.

This Commission terminated its labours towards the end of 1896. It held 136 sittings, examined 187 persons chosen both from among noted supporters and ardent opponents of vaccination; published the results of its labours in seven large volumes; and, when a decision had to be declared, the Commission was divided into two parties: a majority of eleven which recommended that parents who should declare themselves to be conscientiously averse to vaccination should not be compelled to have their children vaccinated; and a minority of four which recommended the *total abolition of vaccination as a state regulation* against small-pox. The English Parliament adopted the recommendation of the majority, with the result that at the present time whosoever does not wish his children to be vaccinated has only to appear before the proper authorities and declare that he conscientiously

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objects to vaccination, on which declaration the authorities are obliged to furnish him with a certificate of exemption.

As in Italy the belief prevails that vaccination is the only safeguard against small-pox, this recent legislation has occasioned considerable surprise; and some have even ridiculed the decision of the English Parliament, although this decision was based on the labours of a very important Commission.

A PERSONAL TESTIMONY.

To-day, in the presence of this distinguished assembly, I, who was formerly a believer in the efficacy of vaccination and am now its inveterate opponent, crave permission to consider this important subject. I should premise that my belief in vaccination was derived not so much from actual knowledge or from information acquired at the University (where vaccination is held to be the only preventive of small-pox) as from inherited belief in the dogma held in common with all medical men leaving the University for professional practice.

The fact that in the course of my annual spring sessions several deaths among the infants submitted for vaccination recurred persistently, caused me to study the problem in all its aspects, with the result that for the last twelve years, *in spite of the ridicule of those who have not the extended experience to which I lay claim*, I have not ceased to strive, albeit wholly unsupported, to make men understand that vaccination has no protective efficacy; that vaccination has no scientific basis; that vaccination is grounded on a phenomenal sequence of blunders; that vaccination entails serious injury direct and indirect; in fine that vaccination is one of the gravest and most fatal blunders into which the medical profession has ever fallen, as I am now prepared to demonstrate.

RATIONAL CONTROL OF SMALL-POX: INSTANCE OF PERUGIA.

The chief characteristics of small-pox are the following:—1. It is a special disease of the human subject, and is not communicable to animals. Consequently the disease can never be conveyed by animals as is the case, for instance, with diphtheria, tuberculosis, and several other diseases. 2. Small-pox is conveyed in one way only; that is from the variolous to the sound individual; either directly by contact, or indirectly through clothing, covering, sheets, etc., that have been used by the patient.

It follows, therefore, that water, air, drainage, subsoil, etc., have no *direct* influence on small-pox. From these plain indubitable facts, which are recognised by all who have studied the question, it is manifest that any centre of population may be free from small-pox during an unlimited period, since the risk of infection only arises when the germs of disease are brought from a locality where the infection exists, either in luggage containing infected garments or in other infected goods, or by a small-pox patient in person, especially during the period of convalescence. Further, should small-pox be imported into a populous centre, and on the appearance of the first case all those measures of isolation prescribed by modern science be taken, so as to ensure that for the rest of the population matters remain as if no disease importation had taken place, clearly no danger will menace the community. And another result will follow, contained in the subjoined query, which raises the most interesting and important point of all: *In a given centre of population, why should any importation of small-pox be possible?* In answer to this question, let me give an actual example. For several years our city of Perugia had not been threatened with small-pox. Last year an individual from the province of Foggia, where small-pox was rife, took the infection and sickened on arrival at Perugia. Careful and thorough disinfection perseveringly carried out by Doctor Vittoria Teyxeira (medical officer of health) with the hearty cooperation of the municipal body, prevented the disease from spreading, even to the family of the patient. Without these precautions, undoubtedly, it would have spread through the whole town; many families would have been plunged in sorrow, and, possibly, at the present time we should still be troubled with it. By this time you will have realised how the idea suggests itself of the paramount importance of those precautionary measures that were adopted, and what heartfelt commendation for, and gratitude towards, our municipal body and the medical officer who carried them out should be unanimously accorded.

And now comes the question: How was small-pox imported into Perugia? Solely because in the province of Foggia, whence it came to us, less energy has been displayed than at Perugia. Here, not only have we arrested the mischief in its beginning, and delivered the town from a threatened serious misfortune, but we have not been as guilty towards other populous centres as Foggia has been to us. Had the small-pox patient of last year not been promptly isolated, not only would Perugia have become infected, but Perugia would have been a centre of infection for other and distant cities and districts which, in order to get rid of our mischief, would have had to fight as we have fought against the grave danger which menaced us.

The inference is clear that were an uniform enactment enforced to-morrow throughout the entire kingdom to the effect that wherever small-pox existed the very simple measures that were taken at Perugia be adopted, in a month's time there would be no small-pox in Italy; because from the date of such enactment no locality could incur the reproach of conveying the infection to other places, and, in the future, we should only need to protect ourselves from the few cases that might be imported from foreign countries. And why is it that precautions so simple and so easily carried out have not been, nor are adopted when on them hang the lives of so many people and the comfort of so many families? Solely because of blind faith in vaccination. In this country, while no legal or prescriptive power exists to compel responsible officials to take the needful prompt measures of isolation, we have a compulsory vaccination law; children are not admitted to any school, no one can be appointed to any office without a vaccination certificate, and, as if this were not enough, we have a lengthy regulation concerning vaccination which, going beyond the law of the land and with unscrupulous disregard of constitutional rights, compels people to be re-vaccinated, and that more than once.

HOW INOCULATION AROSE.

Now let us consider what is this vaccination. An Englishwoman, Lady Maria Wortley Montagu (wife of the British Ambassador at Constantinople), intensely distressed at the disfigurement of a friend by small-pox, resolved to combat the disease with all her might. Having become aware that throughout the East, and especially in China, a custom prevailed of transferring the pus from a variolous person to children, by means of injection, in order to induce a modified form of the disease which should act as a preservative from (as we should say) the natural disease, she decided to introduce the practice into Europe. By way of example, she began with her daughter, on whom the operation was wholly successful. Her medical attendant, Dr. Maitland, delighted with the result of the experiment, became her ladyship's staunch ally. Enthusiasm —in itself highly contagious—pervaded not only England but the whole of Europe, with the result that the practice of inoculation from variolous subjects was speedily adopted, and became general. The fact is undeniable that, in by far the greater number of cases, inoculation produces an attenuated form of small-pox; therefore, at that time, when small-pox was believed to be inevitable, very good grounds existed for the practice. The Chinese have a different theory of which their practice is the logical outcome. They hold that every child is born into the world with small-pox latent in the marrow of its bones, and that inoculation serves to expel the disease! This operation is performed throughout China at the present day in precisely the same manner as in by-gone centuries.

Inoculation spread rapidly throughout Europe; all medical colleges and societies taught that it was the only means of stamping out small-pox; medical books propounded that it was the sole preventive remedy; accordingly, during the whole of the eighteenth century, inoculation became the general practice.

Knowing, as we do, that small-pox can spread only from a variolous to a sound individual, we can readily appreciate one disastrous result of inoculation. To the number of existing variolous cases, each of whom was a nucleus of infection, were added those artificially produced by inoculation, by which means foci of infection were unduly multiplied, resulting, during the eighteenth century, in such an enormous death-rate as had never before been experienced.

ENTERS DR. JENNER.

This state of things brings us to the close of the eighteenth century, when an important change took place. At Berkeley, in the county of Gloucester, England, there resided a general practitioner, of no academic distinction. This person, having been informed by certain dairymen that those of their number who, whilst milking, contracted a disease called cow-pox, never took small-pox, opined that the risks attending inoculation could be diminished by substituting the pus of the vaccine for that of variola—at that time invariably employed. On the 14th of May, 1796, he tested this opinion by performing his first vaccination on a sickly boy named Phipps, on whom, after a month's interval, he experimented with small-pox inoculation, in order to ascertain if the patient had been rendered immune, which, as he asserted, was the case. The great discovery was quickly bruited abroad. A second wave of enthusiasm, mightier even than that which introduced inoculation, seized the popular mind; the tide now set in in favour of vaccination. Honours and distinctions were showered on the practitioner of Berkeley; the English Parliament twice decreed him grants amounting to £30,000 as a reward of his services to the human race; all the medical societies of Europe and America offered him honorary membership; the University of Oxford bestowed on him the degree of doctor of medicine, and from that time Edward Jenner has become the famous scientist of revered memory.

Amid this whirl of excitement the isolated testimony of men, who, after practising Jenner's experiment, discovered that small-pox could be contracted subsequent to vaccination, fell on unheeding ears. Moreover, another factor contributed to the excitement. Nothing could be more probable than that the introduction of vaccination would tend to eliminate the artificial foci of infection due to inoculation, and thereby bring about—what actually befell—a considerable diminution of the disease, which diminution was attributed to the effects of vaccination.

Dr. Jenner's Crude Theories.

In order to account for the protection from small-pox afforded to the human subject by vaccine, Jenner asserted that vaccine was identical with small-pox, which in the cow assumed a milder form; accordingly he gave to cow-pox the name of *variolæ vaccinæ* (small-pox of the cow). This theory, that vaccine is the same as human variola, which in the cow assumes a milder form, has never been abandoned by the medical profession. During a century the profession has striven, with avowed intention, to prove this. Numerous experiments, both in the laboratory and in clinical practice, have not as yet succeeded in establishing any relationship whatever between these two different diseases; nevertheless, even at the present day, it is commonly asserted that vaccine can be nothing else than small-pox. Such is the force of tradition and faith in the dogma respecting vaccination that not even failure in experiment has been able to explode it. For instance, Bernheim, the eminent bacteriologist at Paris, having by repeated, but unsuccessful, experiments, endeavoured to establish the identity of small-pox with cow-pox, arrives at the following conclusion stated in his recently-published work on immunity and serumtherapeutics: "All the same," he says, "I very much incline to the opinion that small-pox and cow-pox are identical."

Nor did matters stop here. Instead of vaccine-pus, that of a disease to which sheep are liable came into vogue under the name of sheep-pox; similarly, the pus of a disease to which the horse is liable (grease) was used and called horse-pox. In Italy, the celebrated vaccinator, Sacco, of Varese, used these three methods of "vaccination," and in Vienna, another renowned vaccinator made use indifferently of cow-pox and horse-pox, adopting the signature of *Doctor De Carro, vaccinator et equinator.*

Thus, at the present day, when the doctrine of disease immunity is being studied on strictly scientific lines, being based solely on results deduced from accurate chemical and bacteriological investigations, we find that, notwithstanding all these researches, no serum has yet been discovered that can with any degree of certainty be adapted to the human subject. So that there is only one form of preventive inoculation that holds its ground whereof the founders were a *sanguine woman*, a few *dairymen*, and an *unscientific country practitioner*; and although based on one of the wildest flights ever indulged in by human imagination, this supposed preventive remedy continues to find strenuous supporters even amongst eminent bacteriologists. Such is the power of belief!

THE APPEAL TO STATISTICS.

In England we find official statistics (with a hiatus of four years, 1843 to 1846) from 1838 to the present time; but for London we have continuous statistics for the whole of the last century as well as the present. I shall refer to both sets of figures. In a pre-vaccination period of twenty years (1781-1800) London yielded an annual average of 1817 deaths from small-pox, with a maximum of 3548 in 1796 and a minimum of 522 in 1797. The first twenty years of vaccination (1801-1820) yielded in London an average mortality from small-pox of 912, with a maximum of 1685 in 1805, and a minimum of 421 in 1818. From 1821 to 1837 the apparent decrease is even greater, so much so that the annual average was only 629, with a maximum of 683 in 1835, and a minimum of 334 in 1834. Comparing the mortality with that of a pre-vaccination period (1781-1800), we note that the decrease is considerable—a decrease which, as already observed, was attributed to vaccination. Vaccination, accordingly, triumphed all along the line, the result seeming to verify Jenner's prediction that small-pox would disappear as soon as the whole of the population was vaccinated. Nevertheless, a great epidemic of small-pox broke out in 1838, which in London alone claimed 3817, and throughout England and Wales 16,278 victims, thereby exceeding the maximum of deaths in 1796. Pro-vaccinists, however, were not dismayed; they maintained that the scourge was due to the circumstance that the entire population was not vaccinated; and, accordingly, we find that, on 23rd July, 1840, the British Parliament passed the first Vaccination Law, by which vaccine lymph was gratuitously provided, and duly qualified practitioners were appointed vaccinators, at the expense of the Poor Rate. By the same law *inoculation* (for small-pox) was strictly prohibited—that same inoculation which obtained during the course of a century, and which all the medical societies had urgently recommended as the only means of combating the disease!

However, during three years (1840-41-42) England registered 19,517 deaths from small-pox; during four years (1847-50) 20,439; and during the next two years (1851-52) 14,317. Again, pro-vaccinists ascribed this high mortality to the unvaccinated portion of the population. In pursuance of their advice Parliament passed, without a dissentient voice, that important Act which made vaccination compulsory under a penalty of a fine of 20s. or imprisonment, for parents and guardians who should neglect to have their children vaccinated within the first three months from birth. But small-pox took little heed of this law; from 1853 to 1862 it claimed 30,537 victims; and 22,853 in the four years from 1863-66. Confronted with these figures, pro-vaccinists again deplored the large proportion of children that escaped vaccination; therefore, the following year (1867) the British Parliament passed another important law, by which the whole of England and Wales was divided into vaccination districts, and Boards of Guardians were authorised to appoint officers, with the duty of following the register of births, so as to ensure that every child entered therein should be vaccinated according to the law of 1853 within the first three months from birth. People had entire confidence in vaccination; opposition there was none; Jenner's prediction seemed about to be verified; when, exactly as everything was in good working order, the great small-pox epidemic of 1871-2 broke out, carrying off in England and Wales no fewer than 42,084, viz., 23,062 in 1871, and 19,022 in 1872.

LEICESTER TRIES ANOTHER WAY.

In view of these appalling figures, many people resented the suggestion put forward by pro-vaccinists, that the recent disaster was due to laxity of administration. At Leicester, which had registered 360 deaths from small-pox in 1872 out of a population of 98,000, an anti-vaccinist demonstration was organised (23rd March, 1885), in which many thousands of the inhabitants joined; the Board of Guardians (whose office it is to carry out the Vaccination Act) was elected from among the most determined opponents of vaccination; and thus it came about that since 1885 Leicester has abandoned vaccination, replacing it by rational precautions calculated to hinder contagion, viz., isolation and disinfection. It is now several years since the *Anti-Vaccination League* was reconstituted upon a *national* basis (General Phelps being the first President) with branches throughout England. Many other towns have followed the example of Leicester, with the result that until the last two months, when compulsory vaccination was *abolished by law*, England presented the singular phenomenon—to us well-nigh incomprehensible—of some towns in which compulsory vaccination had been abandoned, and of others in which the Act was rigorously enforced. Pro-vaccinists predicted that Leicester, as the head and front of the abolitionist party, would suffer grievously should small-pox be brought into the town. They declared that Leicester was preparing a reception for small-pox, as a powder magazine might receive a spark; that the first imported case would be succeeded by a general devastation. However, between 1872 and 1892 small-pox, although twelve times imported into Leicester, failed to propagate itself, prompt isolation having been brought to bear on every case, precisely as happened last year at Perugia.

During the English epidemic of 1892-3, Leicester certainly did not escape a visitation, owing to its inability to prevent the frequent importation of small-pox cases (20 within one month) from well vaccinated towns. But with what a difference from the experience of twenty years before, when it was thoroughly vaccinated! In 1871-2 the deaths from small-pox amounted to 360 out of a population of 98,000; in 1892-3, although the population had meanwhile nearly doubled (175,000), the deaths amounted to only 21. Thus in 1871-2, when the town was well vaccinated, the mortality was 400 per 100,000; in 1892-93, with hardly any vaccination, the mortality was no greater than 12 per 100,000 living. Moreover, in those same years (1891-93) Birmingham had 1203 cases of small-pox, of which 96 were fatal; and Warrington, with a population of not more than 52,000, and, like Birmingham, well vaccinated, had 674 small-pox cases, of which 65 were fatal. Popular fancy had compared Leicester to a powder magazine, where an accidental spark must occasion a huge explosion; but the facts of nature do not always accord with our imagination; Leicester, following the teachings of nature and isolating its small-pox cases, sustained, it must be admitted, some injury, and that injury the direct consequence of the so-called powder magazine explosion—in neighbouring well-vaccinated towns.

SUCCESS OF THE ISOLATION METHOD IN PRUSSIA.

Equally instructive is the example of Prussia. Since 1835 vaccination has been fully carried out in that country; but from that date a law enjoining isolation of every small-pox case has also been in force; with the result that from that year small-pox cases have been much restricted, showing an average of 15 to 20 deaths per annum per 100,000. In 1864, owing to the movement of troops in connection with the Schleswig Holstein war, occasions for the diffusion of small-pox became more frequent; and, accordingly, we note a rise to 46 deaths per 100,000. In 1866, during the war with Austria, the movement of troops was greater still, and deaths from small-pox rose to 62 per 100,000. With the return of peace the mortality diminished; so that in 1870 it amounted to not more than 17 per 100,000. In that year the great war with France broke out, through which 400,000 French prisoners fell into the hands of the Germans. Huddled pell-mell in over-crowded sheds, according to the exigences of the moment, small-pox spread rapidly amongst the prisoners—we all remember Zola's portrayal of this incident in *Le Dèbacle*. These 400,000 prisoners were subsequently interned and distributed throughout Germany, thereby creating innumerable *foci* of small-pox. Of the two legal preventive measures, vaccination only was resorted to, isolation not being possible with so many *foci* of infection. Of what avail was vaccination? Small-pox spread rapidly; and we witnessed an epidemic beyond comparison the most severe that has occurred even in times prior to the invention of vaccination; for, in the short space of two years (1871-2), Prussia lost 136,839 from small-pox, *i.e.*, 59,839 in 1871, and 77,000 in 1872. Thus conquered France inflicted on victorious Prussia, through her prisoners of war, such loss of life as war had never been responsible for.

Pro-vaccinists, far from being dismayed at this death-roll, insisted that it would have been avoided if every individual, instead of being only once vaccinated, had been re-vaccinated. The Prussian Government, therefore, passed the famous law which renders re-vaccination compulsory. This law came into force in April, 1875, when the mortality from small-pox, which in 1872 had reached a proportion of 272 per 100,000, diminished to 35 in 1873, to 9 in 1874, and continuing its natural course of diminution, which was 3 in 1875, reached in 1877 a minimum of 0·35. However, from this last date, regardless of re-vaccination, the mortality once more began to rise. In 1880, the deaths from small-pox amounted to 710; in 1881 to 990; and in 1882 to 1007. The Government, alarmed at this recrudescence, had recourse to increased stringency in regard to isolation, as we find by the following enactment in 1883: "The local police shall include isolation for small-pox of the entire house as well as of the chamber where the patient lies. This isolation shall be continued after removal of the patient to hospital, and until all needful measures of disinfection shall have been carried out. Any one wilfully disregarding these orders will be punished with imprisonment." Ever since this enactment has been in force small-pox has almost disappeared from Germany; of which country it may truly be affirmed that during the last sixteen years small-pox has practically been non-existent, while furnishing the only example in the world of a nation where isolation is by law compulsory.

This plain demonstration of facts is, however, not so evident to pro-vaccinists, who, on the contrary, are never weary of citing Germany as the most striking example of the great efficacy of this new-fangled invention, viz., re-vaccination. They even go much further.

Colossal Failure of Re-vaccination in Japan.

A well-known medical professor at one of our principal universities spoke last year, at a public meeting held in the interests of vaccination, as follows:—"In order to maintain a population in a perfect condition of immunity frequent re-vaccinations should be prescribed; for instance, every five or seven years, as is the practice in Japan according to a law passed in that country in 1885."

I lost no time in inquiring how matters stood in Japan, and I have succeeded in obtaining the following information from official Reports:—In 1872 a Law was passed rendering vaccination compulsory. But, owing to the great mortality from small-pox, the Legislative Chamber in 1885 passed another Law, which made re-vaccination compulsory every five to seven years. In pursuance of this Law, between 1886 and 1892 no fewer than 25,474,370 vaccinations, re-vaccinations, and re-re-vaccinations took place, which means that about two-thirds of the entire population of Japan, already well vaccinated by the Law of 1872, were re-vaccinated, or re-re-vaccinated within a period of seven years. It does not seem possible that the most ardent pro-vaccinist could desire more. Japan, unlike Germany, does not practice isolation. Well, during the seven years (1886-92), that country lost no fewer than 38,979 from small-pox, while 156,175 small-pox cases were notified.

Recent Experiences in Italy.

After such convincing figures as these further proof is needless; yet I must not omit to mention our own country, where the mortality from small-pox should cause every humane person to ask himself whether the time has not arrived for a careful inquiry as to the amount of protection hitherto afforded by vaccination. Here, we have no Anti-Vaccination Leagues; here, everyone believes that vaccination is the only protective against small-pox; here, parents and guardians hold it a prime obligation to have their children vaccinated, so that we have a well vaccinated population. Well, in only ten years (1887-96), small-pox carried off 69,430 individuals, whilst in England during the same period it carried off only 4991—England, which since 1872 has been opposing vaccination; and where, during the latter part of that period, nearly one-third of the infants were escaping its fangs. But these heavy Italian losses did not occur where knowledge, more or less, of the necessity of precaution against infection prevailed; they occurred in districts where, owing to dense ignorance, the contagion was allowed to spread and propagate itself without let or hindrance. During the epidemic of 1887-88, Badolato in Calabria counted 1200 small-pox cases in a population of 3500; and of the 2500 inhabitants in Majerato, about two-thirds, that is more than 1500, were struck down by the disease. At Lei in Sardinia, with a population of 416, 51 died of small-pox; in Laerru, with a population of 800, 79; and Perfugas, in the space of only one month, had 541 cases in a population of 1400. At Randazzo, Regalbuto, Aderno, Leonforte, Bolognetta, Palmi di Montechiaro, Montedoro, Lucca Sicula, etc., etc., the populations were almost decimated by small-pox; while the town of Vittoria, in the province of Syracuse, lost no fewer than 2100 in a population of 26,000. But in the neighbouring town of Terranova, with 20,000 inhabitants, thanks to the exertions of the late lamented Dr. Rainalo, who established a committee of scrutiny, with power to isolate any case that might be imported, although the enemy made nineteen appearances within its walls all contagion was avoided. Terranova, like a besieged city, bravely and successfully withstood these repeated attacks; thus emulating, but on a larger scale, the example of Leicester—for the terrible epidemic had spread throughout Sicily, costing no fewer than 12,611 lives.